

Presenting the primary care team to the public: a qualitative exploration of general practice websites

Abstract

Background

Increasing demand and expanded primary care provision, coupled with a reduced GP workforce, present challenges for primary care. New workforce models aim to reduce GP workload by directing patients to a variety of alternative clinicians. Concurrently, the principle of patient choice in relation to healthcare providers has gained prominence. It is, therefore, necessary to provide patients with sufficient information to negotiate access to appropriate primary healthcare professionals.

Aim

To explore how practice websites present three exemplar healthcare professional groups (GPs, advanced nurse practitioners [ANPs], and practice nurses [PNs]) to patients and the implications for informing appropriate consultation choices.

Design and setting

Qualitative thematic analysis of a sample of general practice websites.

Method

In total, 79 accessible websites from a metropolitan district in the north of England were thematically analysed in relation to professional representation and signposting of the three identified professional groups.

Results

Information about each group was incomplete, inconsistent, and sometimes inaccurate across the majority of general practice websites. There was a lack of coherence and strategy in representation and direction of website users towards appropriate primary healthcare practitioners.

Conclusion

Limited and unclear representation of professional groups on general practice websites may have implications for the direction of patients to the wider clinical healthcare team. Patients may not have appropriate information to make choices about consulting with different healthcare practitioners. This constitutes a missed opportunity to signpost patients to appropriate clinicians and enhance understanding of different professional roles. The potential for websites to disseminate information to the public is not being maximised.

Keywords

choice; general practice; primary care; qualitative research; websites; workforce.

INTRODUCTION

Increased demand, shifts towards high-complexity care, and a growing shortfall of physicians have increased pressures on primary care.^{1–4} Policies to address such pressures include development of advanced nurse practitioner (ANP) and practice nurse (PN) roles,^{5–8} expansion of other health professional roles such as pharmacists and paramedics, and the introduction of new roles such as physician associates (PAs).^{4,9}

With growing emphasis on patient choice^{10,11} and a rapidly changing primary care context,¹ it is necessary for patients to have appropriate information to make informed decisions about consulting with healthcare professionals.¹² Therefore, exploring how healthcare professional roles are explained to the public is important. One way in which primary healthcare providers can inform and support patient decision making in relation to appropriate consultation behaviour is via websites.

The use of websites by healthcare providers in promoting services is growing exponentially¹¹ and the public's utilisation of website information to support decisions about healthcare providers is increasing.^{13,14} Simultaneously, online booking systems allow patients an alternative way of accessing consultations.¹⁴ Consequently, it is necessary to explore how health professional roles are represented on healthcare provider websites as they become an increasingly relevant source of information.

However, little research has examined the information provided on general practice websites, with none specifically focusing on clinician representation. One study of English NHS general practice websites¹⁵ found that the quality of website information was poor. Internationally, there has been little research examining nurse representation on healthcare provider websites.¹¹ Where it exists, focus is on secondary care.^{11,16,17} No studies have explored the representation of ANPs on general practice websites.

This study addresses this knowledge gap by describing how exemplar professional roles (ANPs, GPs, and PNs) are represented and explained across a contemporaneous sample of general practice websites in England, and by exploring the extent to which this might inform patient understanding and choice. Specifically the study aimed to explore the following:

- how GPs, PNs, and ANPs are represented and depicted to patients and the public on general practice websites; and
- whether patients are enabled to make informed decisions or choices about who to consult, from information provided on general practice websites.

METHOD

Design

This was a qualitative, cross-sectional examination of a sample of general practice websites.

H Anderson, RN, MSc, PhD, lecturer in advanced practice, Department of Health Sciences, Faculty of Sciences; **Y Birks**, BSc, DPhil, professor of health and social care, co-director, Social Policy Research Unit, University of York, Heslington, York.

J Adamson, MSc, PhD, professor of applied health research and ageing, Institute of Health and Society, Newcastle University, Newcastle upon Tyne.

Address for correspondence

Helen Anderson, Department of Health Sciences, Faculty of Sciences, University of York, Seebohm

Rowntree Building, Heslington, York YO10 5DD, UK.

E-mail: helen.anderson@york.ac.uk

Submitted: 19 July 2017; **Editor's response:** 4 September 2017; **final acceptance:** 31 October 2017.

©British Journal of General Practice

This is the full-length article (published online 13 Feb 2018) of an abridged version published in print. Cite this version as: **Br J Gen Pract** 2018; DOI: <https://doi.org/10.3399/bjgp18X695009>

How this fits in

Policymakers increasingly encourage direction of patients towards wider healthcare professional roles in general practice. Research suggests that websites play an increasing role in information provision and patient decision making, but little is known about how it may inform patient choice in relation to consultation. This study examines general practice website content in relation to the representation of professional roles and how this may inform patient self-direction to consultations. It highlights the unclear, inconsistent, and sometimes inaccurate representations of contemporary practice in the context of patient choice and effective use of primary care, therefore limiting the direction of patients towards a variety of healthcare professionals.

Sample

This covered a large metropolitan district in the north of England, with a total of 85 general practices across three clinical commissioning groups, identified from the government-run NHS Choices website (accessed March 2015). A total of 79 practices with accessible websites were included in the study.

Data collection

Data collection took place from May to September 2015. Each website was

systematically searched manually by one researcher for any references to GPs, PNs, and ANPs. Screenshots were taken across all websites of homepages; appointments pages; clinics and services pages; and staff information pages, as these pages frequently contained information about different professional groups. Each individual website was also searched for other pages, links, and PDFs to information relating to, or describing, these professional groups. A data extraction proforma (available from the authors on request) systematised the collection of descriptive quantitative data (such as number of practitioners in each professional group).

Analysis

Qualitative data extracted from website content were analysed thematically using framework analysis,¹⁸ as detailed in Figure 1. Following initial familiarisation with website data, a thematic coding framework was developed and systematically applied to the website dataset. Emergent themes were also identified as they arose and applied to the entire dataset. Data were then reordered in tables to group together codes within overarching themes, from which associations between themes were identified. One author primarily conducted the analysis. The second and third authors were involved in analytical discussion as part of the wider research team.

Pseudonyms are used and slight changes made to some quotations to minimise identification. Quote identifiers are also not included.

RESULTS

Sample characteristics

Practices were situated in rural, suburban, and inner-city areas. They represented single-handed general practices through to multi-practice partnerships with population sizes from 1675 to 25 593 patients. Population deprivation scores ranged from 1 (most deprived) to 10 (least deprived).¹⁹

Website characteristics

The majority of practices did not overtly articulate website aims. Where they did, the stated intention was to provide patients with accessible information about the practice, workforce roles, and general health, as well as articulating commitment to a patient-centred approach ($n=33$, 41.8%), for example:

'Patients' needs are at the centre of everything we do. Our website makes it easy for you to gain instant access to information.'

Figure 1. Summary of framework analysis of website data based on Pope et al.¹⁸

STAGE 1. FAMILIARISATION

Familiarisation with, and immersion in, the screenshot data were achieved through reading and re-reading the data within the context of its original website format.

STAGE 2. DEVELOPMENT OF THEMATIC FRAMEWORK

Ideas, themes, and key issues identified during the process of familiarisation were developed into a thematic framework. This drew on study objectives and theoretical insights, as well as through emergent issues identified in the website data such as visibility and qualifications. At regular intervals throughout the process of analysis, discussion of a priori and emerging codes took place within the research team.

STAGE 3. INDEXING (CODING) THE DATA

Website screenshot data were systematically indexed by applying codes derived through the thematic framework and emergent themes, which were coded as they arose. When new themes emerged these were reapplied to the entire dataset.

STAGE 4. CHARTING

Charting involved reordering of data under the appropriate code, or thematic heading. A table was created for each code to which summaries of data and/or verbatim text from individual cases (websites) were attached. This allowed further comparison and contrast within and across cases and themes. The constant comparison method overtly seeks variations, differences, and disconfirming cases across the dataset. This highlights when data do not correspond with emerging analysis. Tables were used to facilitate the grouping together of codes within overarching themes, which informed the fifth stage of analysis.

STAGE 5. MAPPING AND INTERPRETATION

Overarching themes were converted to a diagrammatic representation in order to find associations between identified themes and to map the nature and range of phenomena identified.

Table 1. Profile by professional group

	GPs	ANPs	PNs
Practices with staff group, <i>N</i> (%)	79 (100)	34 (43.0)	75 (94.9)
Clinicians stated across websites, <i>n</i>	450	52	193
Total qualified clinician workforce (<i>n</i> = 695), ^a %	64.7	7.5	27.7
Practice partners stated across websites, <i>n</i> (% of profession)	147 (32.7)	3 (5.8)	1 (0.5)

^aOne practice employed two physician associates and one employed a pharmacist practitioner. These were excluded from analyses as they were not the focus of this study. ANPs = advanced nurse practitioners. PNs = practice nurses.

Similarities across websites, in relation to the language used and website structure, suggested modifications to standardised pre-set templates provided by website development companies. Most websites consisted of a homepage, appointments page, clinics and services page, and a staff information page, which contained information about professional roles.

Quality of information was highly variable within and between websites. Many websites had broken links, missing information, spelling and grammatical errors, and out-of-date information. As a result website users were often presented with inconsistent, unclear, and sometimes inaccurate information across many websites.

Two overarching themes were identified from the data:

- presenting the workforce; and
- levels of professionalism.

Presenting the workforce. Professional group profiles are detailed in Table 1. The qualified clinician workforce mainly consisted of GPs. Most practices employed PNs, who accounted for just over one-quarter of the total registered workforce. ANPs were employed across 43% of general practices, but constituted a small proportion (7.5%) of the total workforce. General practices were predominantly owned by GPs within traditional medical partnerships. A minority of practices

(*n* = 5, 6.3%) were identified as owned by commercial or voluntary sector providers. Three practices had one ANP partner, while another had a PN partner.

Presentation of all professional groups lacked consistency. The level of information varied significantly within and between websites and professional groups. GP roles were described most consistently and were the most prominent of all staff groups. The representation of each professional group is explored in turn.

GPs

The higher visibility of GPs was exemplified on homepages, which are potentially the most prominent webpage in terms of website traffic, as it is the first page the reader usually encounters via search engines. Therefore, visibility and representation of different professional groups on homepages is important. Table 2 demonstrates differential visibility.

Even when other professional groups were included, GPs remained predominant, for example:

'Drs Brown, Smith, Green and Jones operate their partnership at two separate sites. Our team includes Drs Johnson, Campbell and Bell, a full nursing and healthcare team with dedicated reception and administrative support teams.'

Therefore GPs remained the most conspicuous professional group on the most prominent webpage of practice websites, reinforcing traditional consultation models to readers.

Practice nurses

Although employed across the majority of practices, practice nurses were the least visible to patients of all professional groups. Practice nursing was represented in vague terms such as 'routine nursing procedures' and 'general nursing'. They were least likely to have complete, consistent information presented about their role or to be named, and most likely to be presented as a group.

This was typified by one practice that named individual GPs for doctor-led clinics on its clinics and services webpage, but stated the 'nursing team' ran other clinics. Moreover, nurses were regularly presented as doctors' assistants, for example, *'She may assist the doctor with various procedures'* and *'... the duty doctor is assisted by the triage nurse'*.

Accordingly, the widening scope of contemporary nursing practice was not explicit.

Table 2. Professional group visibility on website homepages

	GPs	ANPs	PNs
Websites with professional group stated on homepage, <i>n/N</i> ^a (%)	52/79 (65.8)	3/34 (8.8)	15/75 (20.0)

^aNumber of practices employing professional group. ANPs = advanced nurse practitioners. PNs = practice nurses.

Advanced nurse practitioners

Despite the development of primary care ANP roles as an alternative to GPs, and policies directing patients towards non-physician practitioners, ANPs were not presented on websites in a way that clearly indicated patients could consult with them as an alternative to GPs. For example, 55.9% of appointment webpages completely omitted information about why and how to book an appointment with an ANP ($n = 19/34$), while a further 35.3% presented significantly less information for ANPs than for GPs ($n = 12/34$). In contrast, 91.2% ($n = 72/79$) of practices provided clear information about how to book GP appointments. This meant ANPs were under-represented to patients, with scant information to allow patients to identify why and how to consult with ANPs, or indeed be aware that alternative practitioners were available. Furthermore, although a minority of website appointment pages ($n = 5/79$, 6.3%) directed patients towards practice nurses as an alternative to GP appointments using pre-populated text, three of these practices also employed ANPs, but had no similar signposting of ANP practice. This indicates a lack of strategy in directing patient flow and a specific failure to direct patients to ANPs.

It was also evident that ANP practice did not adequately fit standardised representations of professional roles and the structure of practice websites. This has implications for how patients interpret and understand services, and who they choose to consult. On most websites, clinician information webpages were accessible through a homepage link that connected to several tabs. GPs were represented on the first tab entitled 'Doctors', with 'Nursing Staff' on the second tab. ANPs were predominantly positioned on the 'Nursing Staff' tab ($n = 31/34$, 91.2%), despite their remit being similar to that of GPs. Therefore, professional status overrode clinical role. Because ANP roles did not easily fit these predefined profession-based parameters, it was problematic for practices to situate ANPs on practice websites in ways that effectively articulated their role, thus limiting the potential for patients to consult with such practitioners.

ANPs were often described in inexact and inaccurate terms. The titles 'advanced nurse practitioner', 'nurse practitioner', and 'nurse prescriber' were used interchangeably. Some websites conflated specialist and advanced nursing, which contributes to role confusion, while ANP descriptions were often imprecise, with skills and subjective judgements conflated, for example:

'[The ANP has been] with the practice for the last few years and is well liked by all our patients, she offers a full range of general practice care.'

Accordingly, only 26% ($n = 9/34$) of websites contained adequate explanations of ANP practice, as per UK-recognised advanced practice descriptors,^{5,20–22} and provided sufficient, consistent, and accurate information to enable patients to make decisions about ANP expertise. This is exemplified by one website that states:

'ANPs are registered nurses who have trained to Masters' level to increase their skills and knowledge. They are able to do many roles previously in the domain of the GP, e.g.: diagnose, examine, prescribe, refer, and request blood tests and X-rays.'

In a minority of exemplars, ANPs were described as working alongside or in conjunction with doctors, or as an alternative point of contact to GPs ($n = 13/34$, 38.2%). This demonstrates that information about ANPs can be provided in a way that may support patients in choosing an appropriate professional to consult with.

In order to achieve policy aims of changing how patients use services, it is necessary to consider how such services are presented to, and understood by, patients and whether this clearly reflects new ways of providing primary care. However, websites appear to underpin and perpetuate traditional public perceptions of the clinical workforce, where GPs are presented as the clinician of choice, in a number of subtle ways. This relates to representations of status and competence analogous with levels of professionalism.

Levels of professionalism. GPs were positioned as the gold standard clinician of choice on the majority of websites. Although it is useful to identify the skills of GPs to patients, failure of websites to systematically highlight the skills and professionalism of other healthcare providers may result in patients lacking the knowledge to choose alternative, but appropriate, non-physician clinicians for consultation. This is demonstrated in the ways professional qualifications were represented and by reliance on receptionist triage of patients to ANPs and PNs.

Qualifications

Websites were twice as likely to provide full details of GP qualifications as they were for ANPs, whereas practice nurses were most likely to have no qualifications acknowledged (Table 3). Presentation of qualifications also

Table 3. Professional group qualifications by practice

	Full qualifications stated, <i>n/N</i> ^a (%)	Partial qualifications/ qualifications for some clinicians stated, <i>n</i> (%)	Where clinician qualified, <i>n</i> (%)	When clinician qualified, <i>n</i> (%)	No information about qualifications, <i>n</i> (%)
GP	66/79 (83.5)	5 (6.3)	47 (59.5)	53 (67.1)	8 (10.1)
ANP ^b	14/34 (41.2)	5 (14.7)	5 (14.7)	7 (20.1)	15 (44.2)
PN	20/75 (26.7)	8 (11.0)	2 (2.7)	4 (5.3)	47 (63.0)

^aNumber of practices employing professional group. ^bRN + MSc/PGDip. ANP = advanced nurse practitioner; PN = practice nurse.

varied qualitatively, with websites more likely to provide additional information about GPs, such as where and when they qualified, as well as special interests, than for other groups. Qualifications were presented inconsistently within websites. For example, one practice presented GP qualifications comprehensively and consistently, ANP qualifications were presented in differing orders, thus limiting the extent to which these qualifications could be clearly understood and compared, while no PN qualifications were published. Consequently, emphasis on medical qualifications relative to ANP and nursing qualifications may impact on acceptance of professional groups by patients and the wider public.

Receptionist triage

Receptionist triage was used to direct patient flow on many websites. This involved instructing patients to tell receptionists why they wanted an appointment, then receptionists directed patients to the clinician considered most appropriate, for example:

'When requesting an appointment with our nurse/advanced practitioners, patients will be asked the reason for the consultation to ensure our clinicians can deal with your problem.'

This places decision making with the practice and minimises, rather than supports, patient choice and decision making. This may be alleviated by publishing comprehensive and understandable information about all professional groups on practice websites and by considering different ways of presenting clinicians to better inform patients and, consequently, support patient choice and decision making around choice of provider.

DISCUSSION

Summary

This study identified that general practice websites did not clearly and consistently

provide information about different professional groups. Professional roles were not well explained, especially for PNs and ANPs, constituting a missed opportunity to direct patients to members of the wider healthcare team and consequently relieving pressure on GPs. This was underpinned by the assignment of differing levels of professionalism to different professional groups, reflecting traditional perceptions of medicine and nursing, which potentially perpetuates, rather than expands, public perceptions of healthcare providers.

Decision making was largely kept within the practice, rather than providing patients with information to support them to make appropriate decisions about healthcare provider choice. This limited rather than promoted patient-centredness. The presentation of professional roles on practice websites made it difficult for patients to decide the most appropriate practitioner to consult. This can be seen as counterproductive to the current agenda of effectively signposting patients to different healthcare professionals.

This study explored the previously under-researched representation of professional groups on general practice websites. It highlighted that little focus was given to professional group representation. The extent to which patients could be involved in decision making about healthcare providers was limited by the quality and consistency of information provided. These findings highlight a missed opportunity to maximise the potential of websites to promote professional roles and new ways of working, in order to effectively direct patient flow to the most appropriate practitioners. Fundamentally there appear to be issues about who, and what, practice websites are for and whether they best serve patients or practices.

Strengths and limitations

This is the first study to focus on representation and signposting of GP, ANP,

and PN roles on general practice websites. Qualitative analysis allowed detailed in-depth exploration of role representation. However, further study directly involving patients' views would be beneficial.

This study is an exploratory piece of work that describes what general practice websites look like. Moving forward, it is apparent that it is necessary to further explore both how patients engage with website information and what practices aim to achieve from their website provision. Workload pressures and skill mix variations may mean that practices may seek to control where patients are directed, thus mitigating against patient choice. This would merit further exploration.

Comparison with existing literature

This study explored how GPs, PNs, and ANPs were represented on general practice websites, in order to assess the extent to which practices provided information to signpost patients to different healthcare professionals and promote patient choice in relation to providers. Although most practices did not state the intended aims of their website provision, it is reasonable to assume that public-facing websites would play some role in providing information to patients about who to consult with. However, even when websites were presented as a mechanism for communication and information sharing with patients, thus enabling patient choice, findings indicated that information was lacking. There was an inability to describe professional roles to the public in a way that provided clear, consistent, and accurate information to allow informed decisions about consultation choice. Websites also failed to grasp the opportunity, promoted by policy, to direct consultation traffic away from GPs towards a variety of appropriate healthcare professionals.^{3,4,9} Consequently, websites did not explain workforce roles and promote patient choice. This is important because to change public behaviour it is necessary, in part, to provide accurate and appropriate information.

A lack of attention to the outward-facing presentation of practices to the public was evident across websites, which were unclear in purpose and uninspired in presentation. They lacked quality, accuracy, and consistency in presentation of, and signposting to, different professionals. Although this may be attributable to limited information technology support or public relations inexperience, the level of importance practices placed on their websites as a means of communication

with patients, and consequently the public image of their workforce, did not appear well considered. This is consistent with research indicating general practices in England have been slow to appreciate information technology as a patient information resource,²³ while low-quality information on practice websites has been identified previously.¹⁵ It has been suggested that many practice websites are little more than 'electronic nameplates'.²⁴

Consequently, practice websites can be seen to fail to explain and normalise contemporary healthcare professional roles to the public. This has implications for patient decision making and acceptance of healthcare practitioners more broadly.

There was limited information available on practice websites in relation to ANPs and nursing specifically. That nursing lacks visibility on healthcare provider websites was identified in previous international and North American studies of secondary care websites, which found nursing content inadequate and difficult to locate.^{11,16,17} Furthermore, a study of English general practice websites, which did not include ANPs, found a disparity in presentation of medical and nursing qualifications.¹⁵ Inequitable presentation of professional qualifications is significant on two levels. Lack of presentation of nursing qualifications can be seen to position nursing as less professional than medicine, which may in itself influence patient choice when deciding who to consult. Moreover, although it cannot be assumed that patients understand professional qualifications, patients are able to research these if they so wish. However, as ANP and nurse qualifications are less likely to be provided than GPs', patients are prevented from accessing this information for these professional groups.

That GPs were more visible and consistently represented than practice nurses and ANPs, whose roles are less well defined, is perhaps not unsurprising considering that GPs were predominantly the owners of general practices in this and other studies.²⁵ As a consequence they were potentially influential in directing what information was included on websites. However, because the GPs' role and public image is already well established and understood within public expectations, this has implications for public understanding of different roles and the direction of patients to new consultation models. If patients are expected to consult with practice nurses and ANPs as alternatives to GPs in appropriate situations, the lack

of visibility and clear information about the specific skills these practitioners offer may limit patient understanding and trust. For patients and the wider public to be able to appraise roles and level of practice, as well as to self-direct to their consultation choice, it is crucial that healthcare professional roles are transparent and the competence of all healthcare professionals recognised.

Websites appeared to reinforce traditional and established notions of the professional hierarchies and identities of medicine and nursing, and the disparity of status between professional groups. Whether these representations were planned or subconscious is unclear. That websites often appeared to be based on pre-designed templates and pre-populated texts suggests this reflects understanding at a wider societal level. It has been suggested that established perceptions of healthcare hierarchies are so entrenched that they have become implicitly accepted.²⁶ As a consequence, despite evolving nursing roles, perceptions of nursing remain largely static.

That ANP practice is poorly described on websites can be seen as a consequence of the inability of the nursing profession to clearly define and articulate what is meant by advanced nursing.²⁷ In the UK, ANPs as a profession lack educational standardisation in terms of competencies and level of qualification.¹ This contributes to lack of understanding of advanced practice roles, making it difficult for practices to describe advanced practice in an informative and consistent way. As a consequence, nursing representations remain largely framed within traditional expectations of nursing. If contemporary role descriptions and levels of practice are not made explicit, it is difficult for patients to make informed choices and they may instead base understanding of clinical practice on preconceived and stereotypical perceptions of professional roles.²⁸ This may prevent patients from identifying and accepting the most appropriate practitioner to meet their needs and, consequently, compromise the established need to direct patients to a broader range of practitioners.

Studies of media images of nursing^{29,30} have found that established stereotypes continued to inform the public image of nursing despite new role development, thus limiting patient understanding of expanding nursing roles. Although it is imperative that practices represent healthcare professional roles accurately, it is also incumbent on the nursing profession to raise public visibility and promote more contemporary

representations of nursing.^{28,30} It may be difficult for patients to access and accept ANPs and PNs due to simple lack of awareness about the role, while failing to adequately state professional skills, qualifications, and experience equitably may lead to alternative practitioners being viewed as less able to deal with complexity of care.³¹ This may affect patients' willingness to consult with practitioners other than GPs.³²

Websites were also found to limit patient decision making through reserving privileged information within practice structures, for example, by using receptionist triage instead of publishing adequate information for patients to make appropriate decisions. If the criteria by which patients can identify appropriate practitioners are not made transparent patients may feel funnelled towards different practitioners by stealth. That many websites failed to promote patient choice requires exploration. Although recent attempts have been made to shift to more equal positioning of professionals and patients,¹² traditional relationships between professionals and patients within primary care consultations persist.³³ Websites may be seen as an extension of this.

Dissonance has also been identified in medical practitioners, brought about by tensions created by the pragmatic necessity to permit other practitioners to provide healthcare services and an underlying drive to protect territory and practice traditionally perceived as within a medical remit.³⁴ Inequitable and unclear website representations of different professional roles may demonstrate similar dissonance.

Implications for research and practice

By using general practice websites more effectively, professional roles may be better understood and utilised by patients. Effective direction of patient flow, normalisation of different professional roles, and increased patient choice have the potential to be promoted through website information. This can be supported by:

- ensuring all professions are represented clearly, consistently, and accurately, in a manner that can be easily understood and compared. This allows patients to make appropriate choices in relation to healthcare providers; and
- developing website structures and text that innovatively and accurately reflect contemporary healthcare delivery.

Findings from this study may inform

future representation of newer non-physician practitioner roles such as physician associates and advanced clinical practitioners from various professions.

This preliminary study in an emerging area of research highlighted several strands of future research meriting further exploration, and identified a number of important areas beyond the scope of the exploratory nature of this study. Exploration of UK secondary care website provision and comparison against the international context of competitive, fee-for-service healthcare systems would broaden the application of future studies. Understanding what practices want to achieve from their websites would also be of value.

Future research would benefit from gaining patient and public input into how website information was understood and interpreted; how patients make decisions about providers; whether (and how) websites are used in patient decision making; what information patients require in order to make informed decisions; and how websites can be more effectively used to channel patient behaviour. Exploration of other forms of new media, such as Facebook and Twitter, which were beginning to be used by practices in this study, would also aid understanding of how new media, and technology more broadly, can impact patients' experience and service utilisation.

Funding

This work was funded by the University of York as part of a PhD fellowship.

Ethical approval

Ethical approval for the PhD study was obtained from the Department of Health Sciences Research Governance Committee, University of York (HSRGC/2015/105/B).

Provenance

Freely submitted; externally peer reviewed.

Competing interests

The authors have declared no competing interests.

Discuss this article

Contribute and read comments about this article: bjgp.org/letters

REFERENCES

- Freund T, Everett C, Griffiths P, *et al*. Skill mix, roles and remuneration in the primary care workforce: who are the healthcare professionals in the primary care teams across the world? *Int J Nurs Stud* 2015; **52**(3): 727–743.
- Aranda K, Jones A. Exploring new advanced practice roles in community nursing: a critique. *Nurs Inq* 2008; **15**(1): 3–10.
- NHS England. *Five year forward view*. 2014. <https://www.england.nhs.uk/wp-content/uploads/2014/10/5yfv-web.pdf> [accessed 15 Jan 2018].
- NHS England. *General practice forward view*. 2016. <https://www.england.nhs.uk/wp-content/uploads/2016/04/gp-fv.pdf> [accessed 15 Jan 2018].
- Department of Health. *Advanced level nursing: a position statement*. 2010. https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/215935/dh_121738.pdf [accessed 15 Jan 2018].
- McInnes S, Peters K, Bonney A, Halcomb E. An integrative review of facilitators and barriers influencing collaboration and teamwork between general practitioners and nurses working in general practice. *J Adv Nurs* 2015; **71**(9): 1973–1985.
- Por J. A critical engagement with the concept of advancing nursing practice. *J Nurs Manag* 2008; **16**(1): 84–90.
- Rolfe G. Understanding advanced nursing practice. *Nurs Times* 2014; **110**(27): 20–23.
- Health Education England. *The future of primary care: creating teams for tomorrow. Report by the Primary Care Workforce Commission*. 2015. https://www.hee.nhs.uk/sites/default/files/documents/WES_The-future-of-primary-care.pdf [accessed 15 Jan 2018].
- Victoor A, Delnoij DM, Friele RD, Rademakers JJ. Determinants of patient choice of healthcare providers: a scoping review. *BMC Health Serv Res* 2012; **12**: 272.
- Chen LL, Liu YL. Presence of nursing information on hospital websites in five countries: a review. *Int Nurs Rev* 2010; **57**(2): 168–172.
- BMA Science and Education. *The psychological and social needs of patients*. 2011. http://www.ahsw.org.uk/userfiles/Other_Resources/Health_Social_Care_Wellbeing/psychologicalsocialneedsofpatients_tcm41-202964_copy.pdf [accessed 30 Jan 2018].
- Rafe V, Monfaredzadeh M. A qualitative framework to assess hospital/medical websites. *J Med Syst* 2012; **36**(5): 2927–2939.
- British Medical Association. *GP contract IT requirements*. 2016. <https://www.bma.org.uk/advice/employment/contracts/general-practice-funding/gp-contract-2015-2016-england/gp-contract-it-requirements> [accessed 15 Jan 2018].
- Howitt A, Clement S, de Lusignan S, *et al*. An evaluation of general practice websites in the UK. *Fam Pract* 2002; **19**(5): 547–556.
- Boyington AR, Jones CB, Wilson DL. Buried alive: the presence of nursing on hospital web sites. *Nurs Res* 2006; **55**(2): 103–109.
- Kasoff J. How do hospitals represent the image of nursing on their websites? *J Nurs Adm* 2006; **36**(2): 73–78.
- Pope C, Ziebland S, Mays N. Qualitative research in health care. Analysing qualitative data. *BMJ* 2000; **320**(7227): 114–116.
- Public Health England. National general practice profiles. 2017. <https://fingertips.phe.org.uk/profile/general-practice> [accessed 30 Jan 2018].
- NHS Scotland. Advanced nursing practice toolkit. 2012. <http://www.advancedpractice.scot.nhs.uk> [accessed 30 Jan 2018].
- Nursing and Midwifery Council. *Report on the consultation on a proposal framework for the standard of post registration nursing*. London: NMC, 2006.
- Royal College of Nursing. *Advanced nurse practitioners. An RCN guide to advanced nursing practice, advanced nurse practitioners and programme accreditation*. 2012. http://www.rcn.org.uk/_data/assets/pdf_file/0003/146478/003207.pdf [accessed 30 Jan 2018].
- Smith JJ, Mallard-Smith RJ, Beattie V, Beattie DK. Use of information technology in general practice. *J R Soc Med* 2003; **96**(8): 395–397.
- Jones R. Inequalities in general practice website provision. *Br J Gen Pract* 2011; **61**(592): 663.
- McMurray R. The struggle to professionalize: an ethnographic account of the occupational position of advanced nurse practitioners. *Hum Relat* 2011; **64**(6): 801–822.
- Chulach T, Gagnon M. Working in a 'third space': a closer look at the hybridity, identity and agency of nurse practitioners. *Nurs Inq* 2016; **23**(1): 52–63.
- Bryant-Lukosius, Disenco A, Browne G, Pinelli J. Advanced practice nursing roles: development, implementation and evaluation. *J Adv Nurs* 2004; **48**(5): 519–529.
- Sullivan B, Kasoff J, Carty B. Where is nursing's presence on the medical center's web site? *J Nurs Adm* 2000; **30**(12): 569–570.
- Hallam J. *Nursing the image: media, culture and professional identity*. London: Routledge, 2000.
- Hoeve YT, Jansen G, Roodbol P. The nursing profession: public image, self-concept and professional identity. A discussion paper. *J Adv Nurs* 2014; **70**(2): 295–309.
- Charles-Jones H, Latimer J, May C. Transforming general practice: the redistribution of medical work in primary care. *Sociol Health Ill* 2003; **25**(1): 71–92.
- Rashid C. Benefits and limitations of nurses taking on aspects of the clinical role of doctors in primary care: integrative literature review. *J Adv Nurs* 2010; **66**(8): 1658–1670.
- Chew-Graham CA, Hunter C, Langer S, *et al*. How QOF is shaping primary care review consultations: a longitudinal qualitative study. *BMC Fam Pract* 2013; **14**: 103.
- Fletcher CE, Baker SJ, Copeland LA, *et al*. Nurse practitioners' and physicians' views of NPs as providers of primary care to veterans. *J Nurs Scholarsh* 2007; **39**(4): 358–362.